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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT PAPER NUMBER

1624

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/508,444

Applicant(s)

SCHEFFLER ET AL.

Examiner

Venkataraman Balasubramanian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 15-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response, which included cancellation of claims 11-14 and amendment to claim 1, filed on 12/2/2005, is made of record. Claims 1-10, 15 and 16 are now pending.

In view of applicants' amendment to claim 1 and pointing out that at least one of R_4 and or R_5 should have $-X'-NR_6R_7$ or $-X'-N^+R_3R_6R_7$ group, 102 and 103 rejections over Lebkucher et al., made in the previous office action have been obviated. However, the following rejections made in the previous office action are maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-10 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Blazer et al., US 3,757,010.

Blazer et al. teaches several triaziinylaminostilbene sulfonic acids with quaternary ammonium groups in the side of the substituents on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims. See formula I on column 2 and note the definition of various variable groups. See the process for making which is same as shown in instant claim 8 on column 5 through 7. See column 7 through 16 including Table I-3 for various compounds made.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection was not persuasive. In examples 120 and 126, Blazer et al., teaches compounds, which are also claimed in the instant claims. Note these quaternized compounds of example 1 and 2.

As for the traversal, it should be noted that the definition of R in NRR_3R_4 would include both B_1 and B_2 choices of formula 2, formula 3, formula 4 and formula 5. Note NR_3R_4 can form a piperazine ring substituted with R group, which would overlap with instant formula 2 and 3. also note when R is alkyl substituted with aminocarbonyl, the compounds taught by Schussler et al.

Hence, this rejection is proper and is maintained.

Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Schussler et al., CA 2020666.

Schussler et al. teaches several triazinylaminostilbene sulfonic acids with aminoalkylamino groups and heterocyclic group attached through nitrogen in the side of the substituents on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims. See page 1, formula I and note the definition of various variable groups. Note especially NXY includes groups embraced in the instant B_1 , B_2 , D_1 and D_2 definitions. See pages 5-8 for examples 1-5, for various compounds made.

This rejection is same as made in the previous office action but now limited to claim 9. Examples 1 and 3-5 teach compounds, which are not excluded by the proviso at the end of claim 9.

In addition, it should be noted that the definition of Y in NXY would include both B₁ and B₂ choices of formula 2, formula 3, formula 4 and formula 5. Note X and Y can form a piperazine ring substituted with R group, which would overlap with instant formula 2 and 3. also note when Y is A-NVW where V/W is N(R)₂ or together form a ring with T as O, S, N and CH₂, the compounds taught by Schussler et al.

Claims 1-3, 8-10 and 14-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Eckhardt et al., US 5,945,396.

Eckhardt et al. teaches several triazinylaminostilbene sulfonic acids with alkylaminoalkylamino or quaternary ammonium group bearing alkylamino in the side of the substituents as well as piperazine group on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims. See formula I on column 2 and note the definition of various variable groups. Especially note Rc and Rd definitions include groups embraced in the instant B₁, B₂, D₁ and D₂ definitions. See column 3- through column 7 for preferred embodiments of the invention. See specifically see column 7 through 18 for various examples of the compounds made., which include instant compounds.

In view of applicants' amendment, this rejection has been obviated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blazer et al., US 3,757,010.

Teachings of Blazer et al., as discussed in the above 102 rejections are incorporated herein. As noted above, Blazer et al., teaches triaziinylaminostilbene sulfonic acids with alkylamino and quaternary ammonium groups in the side of the substituents on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims.

Although Blazer et al., exemplify several compounds, Blazer et al., did not disclose all compound generically claimed. However, Blazer et al., teaches equivalency of those compounds exemplified in the examples with those generically claimed in definition of various variable groups for triazinyl aminostilbene sulfonic acids with alkylamino-and and quaternary ammonium bearing alkylamino groups.

Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted in triazine ring and the aryl ring as permitted by the reference and expect resulting compounds (instant compounds) to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection was not persuasive. In examples 120 and 126, Blazer et al., teaches compounds, which are also claimed in the instant claims. Note these quaternized compounds of example 1 and 2.

As for the traversal, it should be noted that the definition of R in NRR_3R_4 would include both B_1 and B_2 choices of formula 2, formula 3, formula 4 and formula 5. Note NR_3R_4 can form a piperazine ring substituted with R group, which would overlap with instant formula 2 and 3. also note when R is alkyl substituted with aminocarbonyl, the compounds taught by Schussler et al.

Hence, this rejection is proper and is maintained.

Claims 1-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schussler et al., CA 2020666.

Teachings of Schussler et al., as discussed in the above 102 rejections are incorporated herein. As noted above, Schussler et al. teaches several triazinylaminostilbene sulfonic acids with aminoalkylamino groups as heterocyclic group attached through nitrogen in the side of the substituents on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims.

More specifically, as noted above, the definition of Y in NXY would include both B_1 and B_2 choices of formula 2, formula 3, formula 4 and formula 5. Note X and Y can form a piperazine ring substituted with R group, which would overlap with instant formula 2 and 3. also note when Y is A-NVW where V/W is N(R)_2 or together form a ring with T as O, S, N and CH_2 , the compounds taught by Schussler et al.

Although Schussler et al., exemplify several compounds, they do not disclose all compound generically claimed, particularly the piperazine compound embraced in NXY definition or A-NVW definition, Schussler et al., teaches equivalency of those compounds exemplified in the examples with those generically claimed in definition of

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various variable groups for triazinyl aminostilbene sulfonic acids with various X and Y choices. Furthermore, Schussler et al., teaches these compounds are useful as optical brightening agent for cellulose fibers as seen in page 4, lines 15-16.

Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted with X and Y choices noted above in triazine ring and the aryl ring as permitted by the reference and expect resulting compounds (instant compounds) to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made in the previous office action. Applicants' argument to overcome this rejection is not persuasive for the reasons cited above. Contrary to applicants' urging, the Schussler et al., teaches generically compounds of claims 1-8 as well as their process of making and use. In addition, Schussler et al., teaching clearly anticipates instant claim 9.

Claims 1-10 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eckhardt et al., US 5,945,396.

Teachings of Eckhardt et al., as discussed in the above 102 rejections are incorporated herein. As noted above, Eckhardt et al. teaches several triaziinylaminostilbene sulfonic acids with alkylaminoalkylamino or quaternary ammonium group bearing alkylamino in the side of the substituents as well as piperazine group on the triazine ring for the same use as optical brighteners, which include compounds claimed in the instant claims.

Although Eckhardt et al., exemplify several compounds, they do not disclose all compound generically claimed. However, Eckhardt et al., teaches equivalency of those compounds exemplified in the examples with those generically claimed in definition of various variable groups for triazinyl aminostilbene sulfonic acids with alkylamino-and and quaternary ammonium bearing alkylamino groups as well as piperazine groups.

Thus it would have been obvious to one having ordinary skill in the art at the time of the invention was made to make compounds variously substituted in triazine ring and the aryl ring as permitted by the reference and expect resulting compounds (instant compounds) to possess the uses taught by the art in view of the equivalency teaching outline above.

This rejection is same as made in the previous office action. Applicants' traversal to overcome this rejection was not persuasive. Although applicants' amendment to D₁ and D₂ excludes amino group taught by Eckhardt et al., the reference clearly teaches equivalency of the amino group with other R_d and R_c choices. Thus, one trained art would be motivated make all such compounds based on the teaching of R_c = NH₂. Hence, this rejection is proper and is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

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